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10/594,636

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Yoshiharu Ohta

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EXAMINER

MARCHESCHI, MICHAEL A

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |  |                                    |  |
|------------------------------|--|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/594,636     | <b>Applicant(s)</b><br>OHTA ET AL. |  |
|                              | <b>Examiner</b><br>Michael A. Marcheschi | <b>Art Unit</b><br>1793            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/9/08.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-18 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 2005/007770.

The WO reference teach in the abstract, sections [0020], [0028], [0039] and [0044] and the claims, a semiconductor polishing composition comprising 20 weight percent fumed silica, wherein the fumed silica has a particles size distribution as set forth at least in the abstract. As can seen from the above passages, the composition can either (1) contain no particles above 100 nm or (2) contain particles above 100 nm in any amount less than 20 volume percent (i.e. 10% or less). In view of this, the claimed invention is anticipated by the reference because the reference teaches a composition that comprises the claimed specific distribution of fumed silica particles.

With respect to the maximum frequency, this reference teaches a maximum size which reads on the claimed maximum frequency.

With respect to claims 6, 7 and 15-18, applicants use process limitations to define the product and "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964.

In the alternative, the subject matter (size distribution) as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see ***In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).**

Claims 1-3, 5-8, 12, 13, 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takashina et al. (217).

Takashina et al. teach in the abstract, sections [0036] and [0047] and the claims, a semiconductor polishing composition comprising 5-30 weight percent fumed silica, wherein the fumed silica has a particles size distribution as set forth at least in the abstract. As can be seen from the above passages, the composition can either (1) contain no particles above 100 nm or (2) contain particles above 100 nm in any amount less than 10 volume percent. In view of this, the claimed invention is anticipated by the reference because the reference teaches a composition that comprises the claimed specific distribution of fumed silica particles.

With respect to claims 6, 7, 15, 16 and 18, applicants use process limitations to define the product and "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964.

In the alternative, the subject matter (size distribution) as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see ***In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).**

Claims 4, 9-11, 14 and 17 are rejected under 35 U.S.C. 103(a) as obvious over Takashina et al. (217).

With respect to the maximum frequency, this reference teaches a maximum size which encompasses the claimed values and thus the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

With respect to claim 17, applicants use process limitations to define the product and "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964.

Applicant's arguments filed 4/9/08 have been fully considered but they are not persuasive..

Applicants argue that the WO reference (Chu et al.) teaches that the composition (1) must contain particles larger than 100 nm and (2) is directed to colloidal silica. These arguments are not persuasive because (1) the reference teaches that the abrasive can have less than 1% of the particles larger than 100 nm and it is well known that less than includes zero, thus the broad interpretation of the reference is that no particles larger than 100 nm are present (see claims coupled with section [0028]) and (2) section [020] clearly discloses that the abrasive is fumed silica. If the reference clearly teaches fumed silica, it can not teach away from this material because a "preferred" teaching is not a teaching away of other abrasives. In addition, it is to be noted that the dependent claims do not exclude particles larger than 100 nm, assuming arguendo.

Applicants argue that Takashina et al. does not teach (1) fumed silica and (2) the claimed size and content of the silica. These arguments are not persuasive because (1) the reference teaches that the abrasive can be fumed silica (section [0036], as applicants admit), (2) the abrasive (fumed silica) is used in an amount of 3-40% of the composition and (3) the amount of silica (fumed silica) having a size of less than 100 nm is within the claimed range, as is evident by parts (i) and (ii), at least, as is defined in the abstract of the reference. If the reference clearly teaches fumed silica, it can not teach away from this material because a "preferred" teaching is not a teaching away of other abrasives. Applicants also appear to argue that this reference uses particles above 100 nm (i.e. 200 nm). This is not persuasive because (1) it is to be noted that the dependent claims do not exclude particles larger than 100 nm and (2) the distribution defined by the reference for part (iii) in the abstract is 75 nm or more and less than 200 nm, thus the broad interpretation of this is that part (iii) can be 80 nm (i.e. no particles larger than 100 nm). Applicants argument about larger particles being defined by the reference is not understood because, as is clearly outlined in the reference, all of the particles can be less than 100 nm.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 1793

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael A Marcheschi/  
Primary Examiner, Art Unit 1793